In the claims

1.   (currently amended) A gun control system comprising:

a fire control kernal providing core fire control functionality that is unaffected by changes within an environment external to the fire control kernel; and,

a plurality of location-independent software components within the fire control kernel, each component having a specific functionality and able to run on any of a plurality of processors in a location-independent manner,

wherein the plurality of location-independent software components comprises a gun mount control interface software component providing access into the fire control kernel for control of a gun mount currently in use,

and wherein the gun mount control interface software component at least one of:

accepts as input gun position and status, gun firing status, and gun ammunition inventory; and,

provides as output deck-reference gun orders and rates, gun mount controls, fire order controls, ammunition controls, and selection orders.

2.   (original) The gun control system of claim 1, further comprising an infrastructure component underlying the plurality of location-independent software components of the fire control kernel to support the components so that each component is able to operate independently of other components in the location-independent manner.

3.   (original) The gun control system of claim 1, wherein the plurality of location-independent software components comprises a target/track management interface software component providing access to the fire control kernel for target-related and track-related data.

4.   (currently amended) ~~The gun control system of claim 3,~~ A gun control system comprising:

a fire control kernal providing core fire control functionality that is unaffected by changes within an environment external to the fire control kernel; and,

a plurality of location-independent software components within the fire control kernel, each component having a specific functionality and able to run on any of a plurality of processors in a location-independent manner,

wherein the plurality of location-independent software components comprises a target/track management interface software component providing access to the fire control kernel for target-related and track-related data, and

wherein the target/track management interface software component accepts as input two-dimensional and three-dimensional sensor track data, indirect target data, sensor status data, and target number selection and reassignments.

5.   (original) The gun control system of claim 3, wherein the target/track management interface software component provides as output sensor designation data, track data requests, and smoothed target state data.

6.   (original) The gun control system of claim 1, wherein the plurality of location-independent software components comprises a gun control system control interface software component providing for control of kernel processing by a gun control operator and external digital control sources.

7.   (currently amended) ~~The gun control system of claim 6,~~ A gun control system comprising:

a fire control kernal providing core fire control functionality that is unaffected by changes within an environment external to the fire control kernel; and,

a plurality of location-independent software components within the fire control kernel, each component having a specific functionality and able to run on any of a plurality of processors in a location-independent manner,

wherein the plurality of location-independent software components comprises a gun control system control interface software component providing for control of kernel processing by a gun control operator and external digital control sources, and

wherein the gun control system control interface software component at least one of:

accepts as input engage controls, system doctrine, and gun control operator console input controls and data values; and,

provides as output engagement status, engagement order responses, overall system status, and controls of peripheral equipment.

8.   (cancelled)

9.   (currently amended) The gun control system of claim [[1]] 7, wherein the plurality of location-independent software components comprises a gun mount control interface software component providing access into the fire control kernel for control of a gun mount currently in use.

10.   (original) The gun control system of claim 9, wherein the gun control mount control interface software component accepts as input gun position and status, gun firing status, and gun ammunition inventory.

11.   (original) The gun control system of claim 9, wherein the gun control mount control interface software component provides as output deck-reference gun orders and rates, gun mount controls, fire order controls, ammunition controls, and selection orders.

12.   (currently amended) ~~The gun control system of claim 1,~~ A gun control system comprising:

a fire control kernal providing core fire control functionality that is unaffected by changes within an environment external to the fire control kernel; and,

a plurality of location-independent software components within the fire control kernel, each component having a specific functionality and able to run on any of a plurality of processors in a location-independent manner,

wherein the plurality of location-independent software components comprises an ownship data interface software component providing access into the fire control kernel for ownship state and attitude data needed for general fire control processing.

13.   (original) The gun control system of claim 12, wherein the ownship data interface software component accepts as input ownship attitude data, ownship speed and course, ownship location, and environmental inputs.

14.   (original) The gun control system of claim 1, wherein the plurality of location-independent software components comprises a gun control system display interface software component providing access into the fire control kernel for extracting display data for a gun mount currently in use.

15.   (original) The gun control system of claim 14, wherein the gun control system display interface software component accepts as input console assignment for multiple-console configurations.

16.   (original) The gun control system of claim 14, wherein the gun control system display interface software component provides as output necessary data to generate one or more fire control displays.

17.   (original) A gun control system comprising:

a fire control kernal providing core fire control functionality that is unaffected by changes within an environment external to the fire control kernel;

a target/track management interface software component located within the fire control kernel and providing in a location-independent manner access to the fire control kernel for target-related and track-related data;

a gun control system control interface software component located within the fire control kernel and providing in the location-independent manner for control of kernel processing by a gun control operator and external digital control sources;

a gun mount control interface software component located within the fire control kernel and providing in the location-independent manner access into the fire control kernel for control of a gun mount currently in use;

an ownship data interface software component located within the fire control kernel and providing in the location-independent manner access into the fire control kernel for ownship state and attitude data needed for general fire control processing; and,

a gun control system display interface software component located within the fire control kernel and providing in the location-independent manner access into the fire control kernel for extracting display data for a gun mount currently in use.

18.   (original) The gun control system of claim 17, further comprising an infrastructure component underlying the target/track management interface software component, the gun control system control interface software component, the gun mount control interface software component, the ownship data interface software component, and the gun control system display interface software component so that each component is able to operate independently of other components in the location-independent manner.

19.-20. (cancelled)